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Patent

Serial No. 10/509,233

Reply to Notice of Non-Compliant Amendment of May 23, 2006

Amendments/Listing of the Claims:

This corrected listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method of writing ~~an~~ information to an optical recording medium ~~(50)~~ by forming mark areas corresponding to a predetermined state of said information on a recording surface of said optical recording medium, said method comprising the step act of adapting said forming step to modulate the shape of said mark areas in a predetermined manner so as to obtain incomplete mark areas which do only partly cover the area of the medium associated with the a channel bit to be written, wherein incomplete mark areas are formed by surrounding a non-data area with a data area.

2. (Currently amended) A method according to claim 1, wherein said shape of said mark areas is modulated comprising the act of modulating said shape of said mark areas to obtain a reduced reflection at said mark area.

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3. (Currently amended) A method according to claim 2, wherein said mark area is a pit area, ~~and a protruding portion is generated~~the method comprising the act of generating a protruding portion substantially in the center of said pit area.

4. (Original) A method according to claim 3, wherein the top region of said protruding portion is adapted to form a land level portion substantially in the center of said pit area.

5. (Currently amended) A method according to claim 3, ~~wherein the size of said protruding portion is adjusted~~comprising the act of adjusting the size of said protruding portion based on the size of a total pit area formed by adjacent pit areas.

6. (Currently amended) A method according to claim 1, wherein said mark area is a pit area, ~~and a hole is generated~~the method comprising the act of generating a hole substantially in the center of said pit area.

7. (Currently amended) A method according to claim 6, ~~wherein the size of said pit hole is adjusted~~comprising the act of adjusting

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the size of said pit hole based on the size of a total pit area
formed by adjacent pit areas.

8. (Currently amended) A method according to any one of claim 1,
~~wherein said incomplete mark area is formed~~comprising the act of
forming said incomplete mark area by a focussed~~focused~~ electron
beam or a ~~focussed~~focused laser beam.

9. (Previously presented) A method according to claim 1,
wherein said optical recording medium is a phase-change recording
medium and said incomplete mark area comprises a small amorphous
mark.

10. (Currently amended) A method according to claim 1, wherein
said optical recording medium ~~(50)~~ is a two-dimensionally encoded
medium.

11. (Currently amended) A method according to claim 10, ~~wherein~~
~~said incomplete pit area is arranged~~comprising the act of arranging
said incomplete pit area in a hexagonal grid of a two-dimensional
coding scheme.

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12. (Currently amended) A method according to claim 1, wherein said method is used for mastering a record carrier ~~(50)~~.

13. (Currently amended) A method according to claim 1, wherein said information is a multi-level coded information ~~and wherein said shape of said incomplete pit area is modulated~~, the method comprising the act of modulating said shape of said incomplete pit area in accordance with the level of said multi-level coded information.

14. (Currently amended) A method according to claim 1, further comprising the ~~step~~ act of forming a cluster pattern of said incomplete marks on each channel bit area and controlling the pattern in accordance with the level of a multi-level coded information.

15. (Currently amended) An apparatus for writing an information to an optical recording medium ~~(50)~~ by forming mark areas corresponding to a predetermined state of said information on a recording surface of said optical recording medium, said apparatus

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being adapted to modulate the shape of said mark areas in a predetermined manner so as to obtain incomplete mark areas which do only partly cover the area of the medium associated with ~~the~~ a channel bit to be written, wherein incomplete mark areas are formed by surrounding a non-data area with a data area.

16. (Original) An apparatus according to claim 15, wherein said mark area is a pit area and said apparatus is arranged to form a pillar portion or a hole within said pit area.

17. (Previously presented) An apparatus according to claim 15, wherein said apparatus is arranged to write a multi-level coded information by controlling the shape or number of said incomplete mark areas in accordance with the level of said multi-level coded information.

18. (Currently amended) A record carrier on which an information is written in the form of mark areas corresponding to a predetermined state of said information, wherein the shape of said mark areas is modulated in a predetermined manner so as to obtain

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incomplete mark areas which do only partly cover the area of the medium associated with ~~the~~ a channel bit to be written, wherein incomplete mark areas are formed by surrounding a non-data area with a data area.

19. (Original) A record carrier according to claim 18, wherein said incomplete mark area is a pit area comprises a pillar portion or a hole.

20. (Original) A record carrier according to claim 18, wherein said information is a multi-level coded information, and wherein the shape or number of said incomplete mark areas defines a level of said multi-level coded information.

21. (New) A method of writing an information to an optical recording medium by forming mark areas corresponding to a predetermined state of said information on a recording surface of said optical recording medium, said method comprising the step of adapting said forming step to modulate the shape of said mark areas in a predetermined manner so as to obtain incomplete mark areas which do only partly cover the area of the medium associated with a

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channel bit to be written, wherein said mark area is a pit area, and a protruding portion is generated substantially in the center of said pit area, and wherein the size of said protruding portion is adjusted based on the size of a total pit area formed by adjacent pit areas.

22. (New) A method of writing an information to an optical recording medium by forming mark areas corresponding to a predetermined state of said information on a recording surface of said optical recording medium, said method comprising the step of adapting said forming step to modulate the shape of said mark areas in a predetermined manner so as to obtain incomplete mark areas which do only partly cover the area of the medium associated with a channel bit to be written, wherein said mark area is a pit area, and a hole is generated substantially in the center of said pit area, and wherein the size of said pit hole is adjusted based on the size of a total pit area formed by adjacent pit areas.